

REMARKS

STATUS OF CLAIMS

Claims 1, 5-8, 10, 11, 15, 18, 22, 24, 27, 30-38, 40, 43, 44, 46 and 68 are pending.

Claims 6-8, 15, 22, 24, 27, 30-36, 40 and 68 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Hyman et al., U.S. Patent No. 6,504,118 (hereinafter "Hyman").

Claims 1, 5, 8-11, 18, 22, 37, 38 and 40 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hyman in view of DeReus, U.S. Patent No. 6,876,482 (hereinafter "DeReus").

Claims 43, 44 and 46 are allowed.

In accordance with the foregoing, claim 10 is cancelled and the claims are amended, and, thus, the pending claims remain for reconsideration, which is respectfully requested.

No new matter has been added.

The Examiner's rejections are respectfully traversed.

ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116:

In accordance with the foregoing, claims 1, 15, 18, 24, 27, 30-38 and 68 are amended to include the features of dependent claim 10. Claim 10 recited "wherein the **plurality of elastically deformable members are hinge springs.**" Claim 15, for example, is amended to recite, in part: "the movable plate comprising a frame sandwiched between the first and second substrates to realize a hermetical sealed structure, a movable portion and a plurality of hinge springs~~elastically deformable members~~ suspending the movable portion from the frame."

37 C.F.R. §1.104(b) recites, in part: "*Completeness of examiner's action.* The examiner's action will be complete as to all matters..."

The Office Action, at page 7, lines 17-18, lists claim 10 as being rejected under 35 U.S.C. § 103(a) as being unpatentable over Hyman in view of DeReus. However, the Office Action fails to reject claim 10 over any prior art. That is, the Office Action fails to assert that any portion of Hyman, DeReus or any combination of Hyman and DeReus discloses the claimed "hinge springs."

Accordingly, Applicants respectfully understood that claim 10 is allowable, and thus the amended claims 1, 15, 18, 24, 27, 30-38 and 68 should be entered by requiring the allowable

features of claim 10, placing the application in condition for allowance, or submit that the Office Action fails to meet the requirements of 37 C.F.R. § 1.104(b), which requires the action to “be complete as to all matters,” thus warranting withdrawal of the finality of the present Office Action, and issuance of a new Office Action, if necessary.

Applicant requests withdrawal of the finality of the Office Action, because the rejections do not meet the requirements of 37 C.F.R. § 1.104(C)(2) by failing to identify the particular part of Hyman for disclosing the claimed “hermetical sealed structure” and “suspending the movable portion from the frame” via elastically deformable members.

Further, Applicants request entry of this Rule 116 Response and Request for Reconsideration because:

(a) it is believed the claim amendments and remarks clarify the patentably distinguishing features of the claimed invention without raising new issues by requiring the limitation of dependent claim 10 which the Examiner has considered, the remarks apply the discussions of Hyman and DeReus specifically to the language of the claims and finality of issues with the Examiner has not been reached, since an anticipation rejection and an obviousness rejection cannot be established over Hyman and DeReus with the claims incorporating features of claim 10, thus warranting entry and consideration of the remarks and withdrawal of the rejection of claims to allow the application and/or withdrawal of the finality of the Office Action.

In view of the amendments and remarks it is believed the claims are allowable over Hyman and DeReus.

35 U.S.C. §102(e) REJECTIONS:

Independent claims 15, 24, 27, 30-36 and 68 are allegedly anticipated by Hyman.

The Office Action, at page 2, relies upon the “fixed base (301)” of Hyman. However, the claimed embodiment provides “movable plate comprising **a frame sandwiched between the first and second substrates to realize a hermetical sealed structure**, a movable portion and a plurality of hinge springs~~elastically deformable members~~ suspending the movable portion from the frame.” Hyman at column 10, 58-61 recites:

A fixed base (101) is a region that is rigid and integral, which may consist of a number of semiconductor, metallic, or dielectric elements that are fixed together to provide mechanical strength.

In other words, Hyman discusses a frame that is rigid and provides mechanical strength. Accordingly, Applicants respectfully submit that Hyman fails to disclose the claimed “frame

sandwiched between the first and second substrates to realize a **hermetical sealed structure**,” as recited, for example, in claim 15, because there is no evidence that the “fixed base (301)” of Hyman provides a “hermetical sealed structure.”

The Office Action does not reject the dependent claim feature of “wherein the plurality of elastically deformable members are hinge springs,” now incorporated in the independent claims. Further, the Office Action, at page 2, asserts:

Hyman et al. discloses ... the moveable plate comprising a frame [301] sandwiched between the first and second substrates to realize a hermetical sealed structure, and **a movable portion** and a plurality of elastically deformable members [the ends of each armatures 309, 359, 389 that are attached to the frame, 310, 360, 390 respectively] the movable portion having a movable electrode...

(emphasis added).

Thus, the Office Action does not expressly assert that any portion of Hyman corresponds to the claimed “movable portion,” as recited in claim 15, for example; however, Applicants assume that the Office Action intended to assert that armatures 309, 359 and 389 correspond to the same. Furthermore, the Office Action, at page 2, fails to assert that any portion of Hyman corresponds to the claimed “plurality of hinge springs~~elastically deformable members~~ **suspending the movable portion from the frame.**” That is, the Office Action appears to assert that “the ends of each armatures 309, 359, 389” correspond to deformable members, however, the Office Action fails to assert that the ends of each armatures 309, 359, 389 provide the claimed “suspending the movable portion from the frame.”

Accordingly, it appears the Office Action is asserting that armatures 309, 359 and 389 of Hyman disclose both the claimed “movable portion” and the claimed “plurality of hinge springs~~elastically deformable members~~ **suspending the movable portion from the frame.**” Applicants respectfully disagree with the assertion as understood by the Applicants. As noted by the Office Action, “the ends of each armatures 309, 359, 389 that are **attached** to the frame, 310, 360, 390 respectively” (emphasis added). Further, Hyman, at column 27, lines 1-9 recites:

The close down actuator armature (309) is seen, with **one end fixed** (310) and one end (311) free to deflect in the direction normal to the base substrate. The load armature (359) is shown perpendicular to the closing actuator armature, with **its one end fixed** (360) and one end (361) free to deflect normal to the substrate. The close up actuator armature (389) is seen opposite the close down actuator armature, and has **a fixed end** (390) and free end (391) in a mirrored fashion.

(emphasis added).

Thus, as seen, for example, in FIGS 13(B and C) of Hyman, when armatures 309 and 389 are deflected, the fixed ends 310 and 390 remain fixed to fixed base 301.

Accordingly, the “fixed ends” (310, 360 and 390) of the armatures 309, 359 and 389 are **not free to deflect**, because, by definition they are “fixed.” That is, Hyman discloses that a deflectable armature is fixed at each end in which the armature is attached to the fixed base. Hyman fails to disclose the claimed “plurality of hinge springs~~elastically deformable members~~ suspending the movable portion from the frame,” because in Hyman both ends of the armature are **fixed** to the relay, and, thus, the armature in Hyman deflects in the middle, both ends being fixed to the relay (see, for example, FIGS 13(A-C)).

Accordingly, Applicants respectfully submit that fixed ends 310, 360 and 390 fail to disclose, either expressly or inherently (necessarily) the claimed “plurality of hinge spring~~elastically deformable members~~ suspending the movable portion from the frame,” because fixed ends 310, 360 and 390 are expressly fixed to prohibit deflection, and, thus, the fixed ends of Hyman cannot correspond to the claimed “hinge springs.” That is, the fixed ends 310, 360 and 390 of Hyman cannot correspond to the claimed “**elastically deformable** members suspending the movable portion from the frame,” because any deflection in Hyman occurs at 311, 361 and 391 which are “free to deflect” and not at the ends 310, 360 and 390 fixed to the base which are not free to deflect. For example, the present Application at page 15, lines 1-24 and FIG. 1 support the claimed embodiment.

Accordingly, Applicants respectfully submit that an anticipation rejection cannot be based upon Hyman, because Hyman fails to disclose, either expressly or inherently, each and every feature of the claimed embodiments, including the claimed “movable plate comprising a frame sandwiched between the first and second substrates to realize a hermetical sealed structure, a movable portion and a plurality of hinge spring~~elastically deformable members~~ suspending the movable portion from the frame,” as recited, for example, in claim 15.

Independent claims 24, 27, 30-36 and 68 patentably distinguish over the cited reference for similar reasons as independent claim 15.

Dependent claims recite patentably distinguishing features of their own or are at least patentably distinguishing due to their dependence from the independent claims.

Withdrawal of the rejection of pending claims and allowance of pending claims is respectfully requested.

35 U.S.C. §103(a) REJECTIONS:

Independent claims 1, 18, 37 and 38 are allegedly unpatentable over Hyman in view of DeReus.

As discussed above, Applicants respectfully submit that Hyamn at least fails to disclose the claimed “movable plate comprising a frame sandwiched between the first and second substrates to realize a **hermetical sealed structure**, a movable portion and a plurality of hinge springs~~elastically deformable members~~ **suspending the movable portion from the frame**,” as recited, for example, in claim 1.

The Examiner merely relies up DeReus to discuss the claimed “multiple contacts,” as recited in claim 1. DeReus merely discusses a MEMS device having a standoff bump (see, for example, FIG. 7). Accordingly, Applicants respectfully submit that DeReus fails to correct the deficiencies of Hyman.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness cannot be based upon Hyman and DeReus, because there is no evidence that one skilled in the art would modify Hyman, DeReus or any combination of Hyman and DeReus to include the claimed “movable plate comprising a frame sandwiched between the first and second substrates to realize a **hermetical sealed structure**, a movable portion and a **plurality of hinge springs**~~elastically deformable members~~ **suspending the movable portion from the frame**,” as recited in claim 1, and see the benefit of providing a hermetically sealed (i.e., airtight) relay where the “plurality of hinge springs” allow smooth up and down motion by the movable portion (see, for example, the Specification at page 17, lines 18-21 and page 30, lines 14-18).

Applicants respectfully submit that independent claims 18, 37 and 38 patentably distinguish over the cited references for similar reasons as independent claim 1.

Dependent claims recite patentably distinguishing features of their own or are at least patentably distinguishing due to their dependence from the independent claims.

Withdrawal of the rejection of pending claims, and allowance of pending claims is respectfully requested.

ALLOWABLE SUBJECT MATTER:

The Office Action, at page 11, indicated that claims 43, 44, 46 are allowed. Furthermore, applicants respectfully submit independent claims 1, 15, 18, 24, 27, 30-38 and 68 patentably distinguish over the cited prior art and are allowable.

CONCLUSION

In view of the remarks presented above, there being no further outstanding objections or rejections, it is respectfully submitted that the application is in condition for allowance, and withdrawal of the rejection of pending claims and allowance of pending claims is respectfully requested. An early action to that effect is courteously solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Respectfully submitted,

STAAS & HALSEY LLP

Date: September 17, 2007

By: /Matthew H. Polson/
Matthew H. Polson
Registration No. 58,841

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501